EPI NATO - It Won't Help You Win the War

Canadian Forces Evaluation of the EPINATO Surveillance System

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Outline

- Introduction
- Background EPINATO
- Evaluation Objectives
- Methods
- Results
- Conclusions
- Outcomes/Next Steps

Introduction

- Health surveillance systems on deployment
  - War
  - Peacekeeping
  - Potential terrorist attacks
  - Natural disasters
- NATO Surgeons General approved EPINATO
- 1996 Canada adopted EPINATO

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EPINATO Purpose

- Monitor disease & injury morbidity trends
  - Emerging health threats
  - Troop strength/readiness
  - Guide Health programs, policies
  - Compare multinational health trends

EPI NATO Description

- Based on the British J95 Surveillance system
- Adopted by NATO for IFOR/SFOR
- Patient Visits categorized using 25 codes
- No specific ICD code assigned
- Captures First and Second visits
- Disposition – duty level, hospitalization, specialist referral

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EPI NATO codes

Code	Description	Code	Description
1	Intestinal infectious disease	13	Dermatological problems
2	Syphilis and STD's	14	Internal derangement of the knee
3	Other infectious diseases	15	Dorsopathies
4	Alcohol and drug abuse	16	Other musculoskeletal
5	Mental disorders	17	Medical complications
5.1	Stress reactions	18	Other diseases
6	Eye disorders	19	Injury due to road traffic accidents
7	Disorders of the ear, nose and throat	20	Injury due to military training
8	Respiratory system disease	21	Injury due to sports
9	Disease of teeth and oral cavity	22	Injury due to war/operations
11	Disease of digestive system	23	Other injury
12	Gynecological (include pregnancy)	24	Climatic injury (heat and cold)
		25	NBC indicators

*** There is no category 10

Evaluation Objectives

- Identify original objectives

- Document & compare data flow/process for Task Force Bosnia-Herzegovina (TFBH)

- Assess key attributes
  - Data quality (reliability/content validity)
  - Timeliness
  - Acceptability

  Data for public health action

Methods: Agreement Study

- Chart audit – August 2003, TFBH
  - Convenience sample 128 patient visits
  - Comparison EPI NATO Codes: UMS vs FHP
  - Blinded
  - Kappa analysis: All codes & injury-related visit codes

- Log audit
  - Examine diagnoses of "other" non-specific codes

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Methods: Stakeholder Interviews

- Standardized questionnaire
- August to December 2003
  - In theatre, TFBH
  - In garrison (Canadian Medical Headquarters)
  - NATO - Supreme Headquarters Allied Powers Europe – SHAPE

Results: Agreement Study

- Chart audit N=128
  - All codes 40% concordance
  - Injury codes 18% concordance
- Log audit
  - 25% (401/1604 visits) "other" codes
  - Misclassified
  - Inadequate categories

Results: Stakeholder Interviews

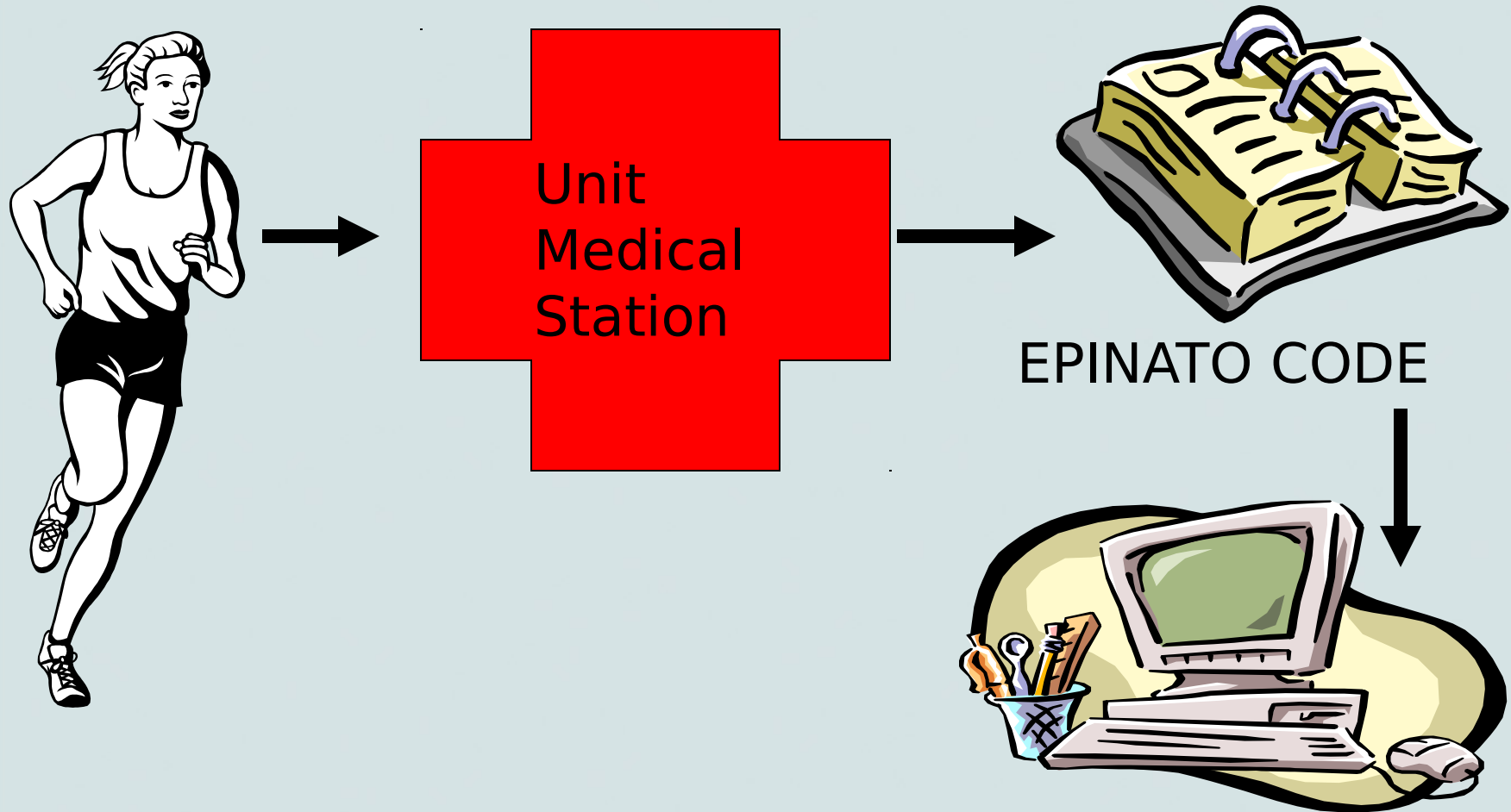- High staff turnover

- No objectives or implementation plan

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Results : Coding Process

Unit Medical Station

EPINATO CODE

Results: Intended Data

```
Canadian Forces Health
Services Group Headquarters
```
├── Medical Operations
└── Force Health Protection

```
Supreme Headquarters Allied Powers Europe
(SHAPE)
Belgium
```
│
```
NATO Headquarters - Balkans
Naples
```
│
```
Stabilization Force (SFOR)
Sarajevo
```
│
```
Multinational Brigade – North West
Banja Luka
```
│
```
Banja Luka
Multinational (UMS)
Lead Nation- UK
```

```
Velika Kladusa
CF Taskforce Headquarters
```
├── Zgon (UMS)
└── Velika Kladusa (UMS)

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Results: Content Validity

- Ambiguous coding definitions
- No categories for common conditions
- No formal training
- No dedicated resources
- Competing surveillance system
  - Medical Situation Report (MEDSITREP)

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Results: Timeliness

- Coded daily
- Reports compiled monthly
- Canadian reports had ceased

Results: Acceptability

- Lack of participation
- No dedicated resources or training
- No feedback at the local level
- Codes aggregated, not useful for epidemiological analyses
- Not used for health actions/policy

Limitations

- Original stakeholders/documentation not available
- "Snap shot" in time
  - CF rotations in the same theatre
  - Other countries implementation
  - Other theatres
- Not randomized chart selection
- No comparison between FHP codes

Summary

- No objectives, planning, implementation
- Poor data quality - Coding not reliable
- No systematic analysis, interpretation or reporting of data
- Gaps in reporting and timeliness
- No public health action

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Conclusion

- EPI NATO not meeting deployment surveillance needs for the CF
- CF initiating a new system: Deployment Surveillance Working group, January 2004

Outcomes: Canadian Forces

- Gradually phase out the two systems EPINATO/MEDSITREP
- New deployment surveillance system
  - Measurable objectives
  - Electronic coding - ICD 10 codes
  - Clear roles & responsibilities, operational plan
  - Training
  - Feedback to users at all levels
  - Data informs public health action

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Electronic Coding

- ICD 10 code assigned based on diagnosis
- Allows for standardized coding, less error
- User friendly, easier
- Comparisons between theatres, countries
- Provides more useful, detailed health data
- Can be rolled up into larger categories
- Presently under development

Outcomes: NATO

- Chiefs of Military Medical Services (Preventive Medicine Working Group), Presentation given on CF evaluation April 2004
- COMEDS Prev Med Working group awaiting demo of electronic database.
- Other electronic systems may already be in place

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